

Euphosynoplax campechiensis, new species
(Crustacea, Decapoda, Brachyura, Goneplacidae),
from the continental shelf of the Southwestern Gulf of Mexico

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Abstract. — During trawl sampling activities on the continental shelf of the southwestern Gulf of Mexico, a new species of *Euphosynoplax* Guinot was found at six different localities. This second species of *Euphosynoplax*, *E. campechiensis* sp. nov., is compared with the only known species *E. clausa* Guinot, originated from the Gulf of Mexico.

Résumé. — Des chalutages le long de la plate-forme continentale du golfe du Mexique ont permis de récolter dans six localités distinctes une nouvelle espèce du genre *Euphosynoplax* Guinot, *E. campechiensis* sp. nov. Cette deuxième espèce de *Euphosynoplax* est comparée avec l'unique espèce *E. clausa* Guinot, également originaire du golfe du Mexique.

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During sampling activities on the continental shelf of the southwestern Gulf of Mexico aboard the research vessel "Justo Sierra" of the Universidad Nacional Autónoma de México (PROGMEX 1, 2 and 3 cruises), several specimens of goneplacid-like brachyuran crabs were collected using a semicommercial otter-trawl. These specimens were first identified as *Euphosynoplax* Guinot. A later examination of these demonstrated that they belonged to an undescribed species of *Euphosynoplax*. The description of this new species is presented here and compared with *E. clausa*.

The holotype is deposited at the Secretaria de Marina Investigaciones Oceanográficas (SMIOM) collection and paratypes are deposited at the Muséum national d'Histoire naturelle Paris (MP) and Instituto de Biología Universidad Nacional Autónoma de México (EM).

***Euphosynoplax campechiensis* sp. nov.**
(Fig. 1 a; 2 a; 3 a; 4 a; Pl. I A-C)

MATERIAL EXAMINED. — PROGMEX1 cruise, station 28, March, 1983; 19°04.4'N-92°43.2'W, off S. Pedro and S. Pablo rivers, Campeche, 85 m depth : 1 ♂ holotype 29.2 × 41.2 mm (SMIOM-01664); 1 ♂ paratype 29 × 42 mm (SMIOM-01665); 1 ♂ paratype 30 × 47.3 mm (EM-10734); 1 ♂ paratype 29.6 × 41.6 mm (MP-B 22313) — station 32B, April, 1983; 19°22.1'N-92°32.5'W off Términos Lagoon,

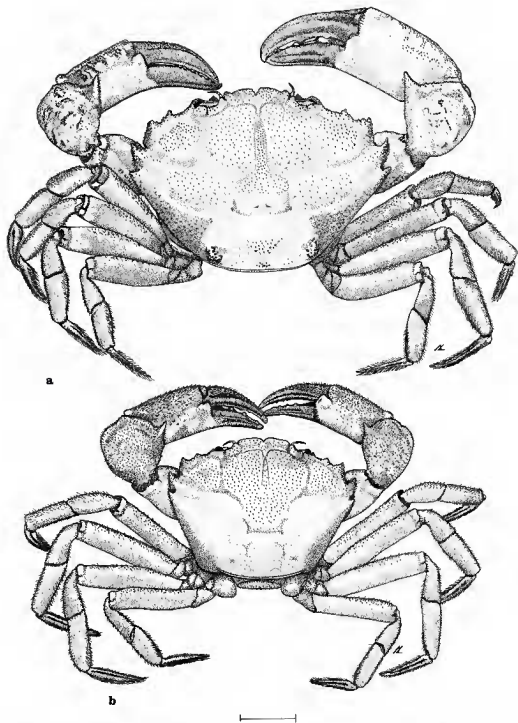


FIG. 1. — a : *Euphosynoplax campechiensis* sp. nov., ♂ holotype (SMIOM 01664), dorsal view of carapace and appendices (external fissures not visible); b : *Euphosynoplax clausa* Guinot, ♂ (PROGMEX2 E 22), dorsal view of carapace and appendices. Scale a-b : 1 cm.

Campeche, 113 m depth : 1 ♂ 26.7 × 36.4 (SMIOM-01666) — PROGMEX2 cruise, station 45X, April, 1984; 21°27.3' N-92°25.3' W, off Champotón river, Campeche, 158 m depth : 1 ♂ 13.4 × 18 mm (SMIOM-01667) — PROGMEX3 cruise, station 9, August, 1984; 18°46.4' N-94°59.7' W, off Pta. Zapotitlán, Veracruz, 88 m depth : 1 ♂ 17.4 × 24 mm (SMIOM-01668) — station 38, August, 1984; 19°28.8' N-91°57.6' W, off Terminos Lagoon, Campeche, 47 m depth : 1 ♀ allotype 17.6 × 25.4 mm (SMIOM-1669) — station 42, August, 1984; 19°59.9' N-92°04.1' W, 108 m depth : 1 ♂ 26.7 × 38 mm (SMIOM-01670).

DESCRIPTION

Carapace hexagonal, xanthoid, broader than long, aerolation evident. Surface granulated, pubescent, densest granulation on anterolateral border, teeth and front. Regions fairly marked; hepatic regions elevated and strongly granulated. Carapace widest at level of fourth anterolateral tooth. Front narrow, moderately convex, divided in half by prominent notch, each half bilobed; inner lobe sinuate, broad; outer lobe forming a conspicuous tooth.

Orbits small and deep, eyestalk short, broad and granulated; upper orbital border with two fissures; suborbital border with acute inner tooth; outer orbital tooth wanting.

First tooth of anterolateral border, small, almost conical; second tooth close to first, much larger, triangular, subacute; both first and second teeth on a level with upper orbital margin. Third tooth largest, acuted, directed obliquely forward and a little upward, separated from second by a distance much greater than that separating second from first; last tooth smaller than third and directed outward.

Antero-external angle of merus of third maxilliped strongly produced. Ischium with inner orange spot.

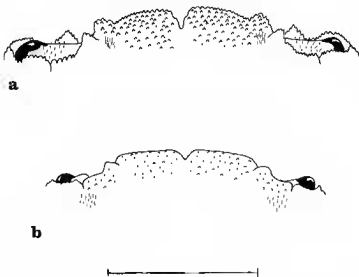


FIG. 2. — a : *Euphosynoplax campechensis* sp. nov., ♂ holotype (SMIOM 01664), dorsal view of front and orbits (antennal articles omitted); b : *Euphosynoplax clausa* Guinol, ♂ (PROGMEX2 E-22), dorsal view of front and orbits (antennal articles omitted). Scale a-b : 1 cm.

Chelipeds massive, granulated, unequal. Larger chela with conspicuous granules on external surface and with ridge of tubercles on superior border; minor chela with fairly strong ridge of tubercles on superior border more prominent than major chela. Carpus with stout and acute inner spine, inner margin indented; merus toothed on superior border. Inner side of palm inflated, smooth except borders which are conspicuously granulated; fingers long, pointed, with two sulcis on external surface, more evident in minor chela, slightly incurving, irregularly toothed with 2 or 3 strong projecting teeth.

Pereiopods slender; slightly flattened, granulated, superior border of merus dented. Pubescence well defined on carpus, propodus and dactyl, not very evident on carpus; dactyl slightly curved.

Male abdomen strongly granulated, first and second somites not reaching coxa of fifth pereiopod at each side; small portion of sternite eight visible between second and third abdominal somites; third of fifth somites fused. Sixth somite wider than long, sides concave; seventh somite (telson) triangular, sides straight, tip rounded.

Male opening coxal. First pleopod long, slender, curved and with several strong subterminal spinules in addition to marginal spinules on distal part; opening terminal flanked by a large subrectangular protective lobe. Second pleopod stout, curved and ending in falciform process pubescent at base.

The only female available is similar in shape to carapace, front, and anterolateral, and posterolateral margins of male. Chelipeds of female unequal, more pubescent, specially minor chela, similar in shape to chelipeds of male. Abdomen narrow, all segments free, seventh segment (telson) triangular; sternum finely granulated and pubescent. Gonopores almost rounded, and shallow.

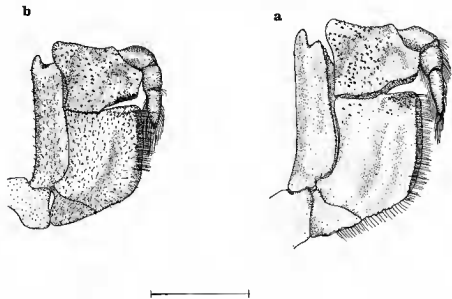


FIG. 3. — a : *Euprosynoplax campechiensis* sp. nov., ♂ holotype (SMIOM 01664), abdomen; b : *Euprosynoplax clausa* Guinot, ♂ (PROGMEX2 E-22), abdomen. Scale a-b : 5 mm.

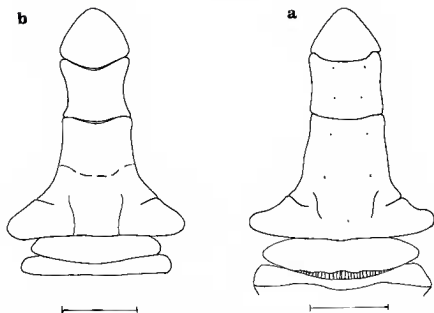


FIG. 4. — a : *Euphosynoplax campechiensis* sp. nov., ♂ holotype (SMIOM 01664), third maxilliped; b : *Euphosynoplax clausa* Guinot, ♂ (PROGMEX2 E-22), third maxilliped. Scale a-b : 5 mm.

In the smallest organisms the front is not advanced, the external tooth is not conspicuous; the minor chela is more tuberculated and the crest of dactyl is more evident.

Colour : This new species is orange-brown, except for the finger of the chelae which are black; some specimens, mainly the smallest ones have little orange spots on carapace.

ETYMOLOGY. — *E. campechiensis* is named after the Bank of Campeche where it was collected.

DISTRIBUTION. — Found in the Gulf of Mexico, on the continental shelves of Veracruz and Campeche, México.

REMARKS

The type material of *Euphosynoplax campechiensis* was compared with specimens of *E. clausa* collected during the cruises PROGMEX1, 2 and 3 with the description of GUINOT (1969b : 720; figs 127a, b; 139; pl. IV (*recte* V), fig. 3). A comparison with the paratype held at the Muséum national d'Histoire naturelle, Paris (MP-B 10153, ex USMN 65938) was kindly done by Dr. GUINOT.

This new species differs from the only other species of the genus *E. clausa* by several characteristics (table 1). The most evident are : front bilobated with external conspicuous

TABLE 1. - Main differences between *Euphrosynoplax campechiensis* and *E. clausa* Guinot.

	<i>E. campechiensis</i>	<i>E. clausa</i>
CARAPACE	Regions well marked Front bilobed, indented with deep notch; with a conspicuous external tooth Anterolateral margin long Hepatic region with a protuberance	Regions little marked Front bilobed, smooth with shallow notch; without external teeth Anterolateral margin short Hepatic region without protuberance
ORBIT	Orbits large, deep Eyestalks large, pubescent Suborbital tooth conical, acuted, indented Inner orbital tooth stout, well defined	Orbits small, shallow Eyestalks short Suborbital tooth obtusely triangular Inner orbital tooth reduced
CHELIPED	Minor chela with carpus rugose, superior border of propodus with tubercles	Minor chela with carpus smooth; propodus granulated
ABDOMEN (male) (female)	Sixth segment longer than wide, sides con- cave Seventh segment triangular, sides almost straight Abdomen narrow; seventh segment trian- gular	Sixth segment almost longer than wide, sides strongly concave Seventh segment semioval, sides slightly convex Abdomen wide; seventh segment rounded
FIRST PLEPOD	Slender; opening with a larger protective subrectangular lobe, without proximal pro- cess	Opening with a short protective, subcon- ical lobe with a large proximal process

tooth; male abdomen terminating in a triangular somite; the male first pleopod more deflexed and with a subrectangular protective lobe in the new species. In dorsal view, the new species differs from *E. clausa* in that the carapace has the regions well marked, the front has a deep notch, and the orbits are small and deep. The anterolateral margin is also slightly larger than *E. clausa*. In *E. campechiensis* the carapace length is about to 1.54 to 1.91 times the large anterolateral margin, while in *E. clausa* (calculated from material examined at PROGMEX 1, 2 and 3 cruises) it is 1.93 to 2.26.

With respect to the habitat, *E. clausa* has been collected between 91-210 m (PEQUEGNAT, 1970; POWERS, 1977), but in PROGMEX 1, 2 and 3 cruises it was taken on 47 to 171 m, while *E. campechiensis* was found in a bathymetric range of 85 to 158 m. Environmental data indicate that the new species is associated with muddy bottom (VÁZQUEZ-BADER and GRACIA *in press*). As stated by GUINOT (1969b : 720), *Euphrosynoplax* presents a catometopus organization, with the male opening coxal but a small portion of sternite 8 not covered by the second abdominal somite ("apparaît comme un Catométope tout à fait primitif"); see GUINOT, 1969a : 244.

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A



B



C

PLATE I. — *Euphosynoplax campechiensis* sp. nov., paratype (SMIOM 01665): A, first pleopod; B, first pleopod (40 ×); C, tip of first pleopod (94 ×).



A



B

PLATE II. — *Euprosynoplax clausa* Guinot, (PROGMEXI E-32) : A, first pleopod (44 ×); tip of first pleopod (86 ×).